

DISCLOSURE OF THE INVENTION

A method for producing a pocket coil bag row 17 according to the present invention includes the steps of conveying and sending coil springs 2, 2' having different wire diameters, sent out from at least two or more coil spring producing apparatuses 1, 1' for respectively producing the coil springs 2, 2' having different wire diameters, into a coil chute section 3 having receiving chambers 4, 4' corresponding to the coil springs 2, 2' having different wire diameters at the side of an entrance 5, opening/closing sections 6, 6' in the lower portions of the respective receiving chambers 4, 4', and a single exit 7 for discharging the coil springs 2, 2' having different wire diameters; controlling the opening/closing of the opening/closing sections 6, 6' by selecting a destination of an opening/closing signal for deciding which of the opening/closing sections 6, 6' of the coil chute section 3 is to be opened; sending out the coil springs 2, 2' to the exit of the coil chute section 3 in an order so that the coil springs 2, 2' are arranged in a previously set pattern of the coil springs 2, 2' having different wire diameters; and enclosing the coil springs 2 sequentially in the order of the previously set pattern by a coil spring enclosing apparatus that forms continuous bags 9 and encloses the coil springs individually into the bags 9.

An apparatus for producing a pocket coil bag row 17 according to the present invention includes at least two or more coil spring producing apparatuses 1, 1' for respectively producing coil springs 2, 2' having different wire diameters, and an apparatus for conveying the coil springs 2, 2' having different wire diameters from the respective coil spring producing apparatuses 1, 1' to a coil chute section 3, wherein the coil chute section 3 includes a plurality of receiving chambers 4, 4' provided at an entrance 5 of the coil chute section, corresponding to the coil springs 2, 2' having different wire diameters sent from the respective coil spring producing apparatuses 1, 1', opening/closing sections 6, 6' provided in the lower portions of the receiving chambers 4, 4', and a single exit 7, a control device 8 is provided for controlling opening/closing of the opening/closing sections 6, 6' by selecting a destination of an opening/closing signal for deciding which of

the opening/closing sections 6, 6' is to be opened so that the coil springs 2, 2' are arranged in a previously set pattern of the coil springs 2, 2' having different wire diameters, and the coil springs 2, 2' are sent out to the exit 7 of the coil chute section 3 in an order of the previously set pattern, and enclosed in the order of the previously set pattern individually into continuous bags 9 while forming the bags 9.

The apparatus for producing the pocket coil bag row 17 is provided with a feeding auxiliary apparatus, provided corresponding to each of the receiving chambers 4, 4, for sending the coil springs 2, 2' having different wire diameters when the opening/closing sections 6, 6' of the coil chute are open.

The apparatus for producing the pocket coil bag row 17 is provided with heat treatment apparatuses 12, 12' for heat treating the coil springs 2, 2' having electrodes provided at both sides of any area of the conveying apparatus 10, 10' for conveying the coil springs having different wire diameters to the coil chute section 3.

The apparatus for producing the pocket coil bag row 17 is provided with a metal sensor 14 for determining whether or not the coil springs 2, 2' having different wire diameters inserted into a folded cloth sheet 13 are inserted.

The apparatus for producing the pocket coil bag row 17 is provided with a marking apparatus for marking the cloth sheet to identify the type of the coil springs 2, 2' to be enclosed in the bag 9.

The apparatus for producing the pocket coil bag row 17 is provided with a feeding apparatus 16 for adjusting feeding speed of the cloth sheet 13 depending on the type of the coil springs 2, 2' inserted into the cloth sheet.

A pocket coil sheet is formed of a pocket coil bag row 17 produced by the method for producing the pocket coil bag row 17 according to the present invention, and the coil springs 2, 2' having different wire diameters are enclosed in the pocket coil bag row 17.

In a pocket coil sheet formed of a plurality of pocket coil bag rows 17 produced by the method for producing the pocket coil bag row 17 as stated in claim 1, the coil springs 2, 2' having different wire diameters are enclosed in the

same pocket coil bag row among the plurality of pocket coil bag rows 17.